

Appendix table 5-49.
Intraregional scientific collaboration in selected regions: 1986 and 1999
(Percentages)

Western Europe												
Country/ economy	Belgium	Denmark	Finland	France	Germany	Italy	Netherlands	Norway	Spain	Sweden	Switzerland	United Kingdom
Belgium												
1999	na	2.9	2.4	23.8	15.3	9.7	14.0	2.1	5.5	4.6	5.1	15.5
1986	na	1.6	1.2	23.1	11.6	6.9	12.4	0.7	3.0	3.5	6.2	12.0
Change ...	na	1.3	1.1	0.7	3.7	2.8	1.5	1.4	2.4	1.1	-1.1	3.5
Denmark												
1999	3.8	na	5.0	9.6	16.9	8.6	8.2	6.2	5.5	14.6	4.6	19.3
1986	2.0	na	3.5	8.4	13.5	4.0	5.5	5.1	1.4	18.0	4.8	15.4
Change ...	1.8	na	1.5	1.2	3.5	4.6	2.8	1.1	4.1	-3.3	-0.2	3.9
Finland												
1999	4.0	6.4	na	9.5	15.4	7.7	5.9	6.7	3.8	18.3	6.1	15.0
1986	2.7	6.1	na	6.1	13.9	3.9	4.4	4.1	0.5	17.1	5.4	10.4
Change ...	1.3	0.3	na	3.4	1.4	3.8	1.5	2.6	3.3	1.2	0.7	4.7
France												
1999	6.4	1.9	1.5	na	15.1	10.6	4.7	1.4	6.9	3.0	7.2	13.6
1986	6.1	1.7	0.7	na	11.4	8.3	3.7	0.5	4.0	2.8	6.8	10.9
Change ...	0.2	0.2	0.8	na	3.7	2.3	1.0	0.8	2.8	0.2	0.4	2.8
Germany												
1999	3.1	2.6	1.9	11.5	na	7.5	5.8	1.2	4.0	3.7	8.1	12
1986	2.6	2.4	1.4	9.7	na	5.5	5.4	1.1	2.0	3.5	9.4	10.6
Change ..	0.5	0.2	0.4	1.8	na	1.9	0.4	0.1	2.0	0.2	-1.4	1.5
Italy												
1999	4.2	2.8	2.0	17.2	16.0	na	6.0	1.3	7.8	3.9	8.5	16.3
1986	3.5	1.6	0.9	15.6	12.3	na	4.2	0.5	3.2	3.6	8.7	14.5
Change ...	4.2	2.8	2.0	17.2	16.0	na	6.0	1.3	7.8	3.9	8.5	16.3
Netherlands												
1999	9.2	4.1	2.3	11.5	18.7	9.1	na	2.0	5.0	4.8	5.6	19.1
1986	8.9	3.1	1.4	9.9	17.0	6.0	na	1.4	1.9	4.0	5.6	15.7
Change ...	0.3	1.0	0.9	1.6	1.6	3.0	na	0.6	3.1	0.8	-0.1	3.4
Norway												
1999	4.8	11.0	9.3	11.9	14.0	7.0	7.0	na	4.3	20.7	5.5	16.0
1986	1.6	9.2	4.2	4.6	10.9	2.5	4.6	na	0.5	23.4	3.5	15.7
Change ...	3.3	1.8	5.1	7.3	3.1	4.6	2.5	na	3.8	-2.7	2.0	0.3
Spain												
1999	3.7	2.8	1.5	17.1	13.3	12.0	5.1	1.2	na	3.2	4.3	16.8
1986	4.4	1.5	0.3	21.8	13.0	9.1	3.7	0.3	na	2.7	3.8	18.7
Change ...	-0.7	1.2	1.2	-4.7	0.4	2.8	1.3	0.9	na	0.4	0.4	-1.9
Sweden												
1999	3.5	8.4	8.3	8.7	13.8	6.8	5.5	6.7	3.6	na	3.7	14.7
1986	2.4	9.5	5.2	7.2	10.4	4.9	3.8	6.9	1.3	na	5.3	11.4
Change ...	1.1	-1.1	3.1	1.4	3.3	1.9	1.8	-0.1	2.3	na	-1.6	3.4
Switzerland												
1999	3.5	2.4	2.5	18.5	27.5	13.5	5.8	1.6	4.4	3.4	na	14.8
1986	3.8	2.3	1.5	15.4	25.2	10.4	4.7	0.9	1.6	4.7	na	11.8
Change ...	-0.2	0.1	1.1	3.1	2.3	3.0	1.1	0.7	2.8	-1.3	na	3.0
United Kingdom												
1999	3.4	3.2	2.0	11.3	13.1	8.3	6.4	1.5	5.6	4.3	4.7	na
1986	2.4	2.4	0.9	8.2	9.4	5.8	4.4	1.4	2.6	3.4	3.9	na
Change ...	1.0	0.8	1.1	3.1	3.8	2.5	2.0	0.2	3.0	0.9	0.8	na

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 5-49.
Intraregional scientific collaboration in selected regions: 1986 and 1999
(Percentages)

Asia												
Country/ economy	China	Hong Kong	India	Indonesia	Japan	Malaysia	Philippines	Singapore	South Korea	Taiwanese Economy	Thailand	Vietnam
China												
1999	na	10.8	1.7	0.1	16.4	1.5	0.3	3.0	2.3	2.5	0.4	0.1
1986	na	0.1	0.1	0.4	12.1	0.0	0.1	0.3	0.5	0.8	0.3	0.0
Change ...	na	10.6	1.6	-0.3	4.4	1.5	0.1	2.7	1.8	1.7	0.1	0.1
Hong Kong												
1999	40.6	na	0.9	0.1	3.0	0.6	0.5	2.8	1.0	2.4	0.5	0.0
1986	7.1	na	0.0	0.0	7.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Change ...	33.4	na	0.9	0.1	-4.1	0.6	0.5	2.8	1.0	2.4	0.5	0.0
India												
1999	3.6	0.5	na	0.4	10.3	3.5	0.7	0.7	1.7	1.8	0.4	0.2
1986	0.1	0.0	na	0.1	7.5	0.2	0.2	0.4	0.1	0.0	0.3	0.0
Change ...	3.5	0.5	na	0.3	2.7	3.3	0.5	0.2	1.6	1.8	0.1	0.2
Indonesia												
1999	1.3	0.4	3.4	na	25.9	0.9	2.2	1.3	0.9	0.4	4.3	2.6
1986	4.9	0.0	1.6	na	23	3.3	1.6	0.0	3.3	0.0	1.6	0.0
Change ...	-3.6	0.4	1.8	na	2.9	-2.4	0.5	1.3	-2.4	0.4	2.7	2.6
Japan												
1999	7.0	0.3	2.1	0.6	na	0.4	0.4	0.3	4.5	1.4	1.0	0.2
1986	3.7	0.0	2.7	0.6	na	0.2	0.7	0.3	1.8	1.5	1.0	0.0
Change ...	3.3	0.3	-0.6	0.1	na	0.1	-0.3	0.0	2.7	-0.1	0.0	0.2
Malaysia												
1999	17.7	1.7	19.5	0.6	9.9	na	0.0	4.4	1.5	0.9	4.4	1.2
1986	0.0	0.0	2.6	2.6	7.7	na	1.3	1.3	2.6	0.0	3.8	0.0
Change ...	17.7	1.7	16.9	-2.0	2.2	na	-1.3	3.1	-1.1	0.9	0.5	1.2
Philippines												
1999	5.0	2.5	7.0	2.5	20.1	0.0	na	0.5	1.0	1.5	9.0	1.5
1986	1.2	0.0	2.4	1.2	21.4	1.2	na	1.2	0.0	2.4	6.0	0.0
Change ...	3.8	2.5	4.7	1.3	-1.3	-1.2	na	-0.7	1.0	-0.9	3.1	1.5
Singapore												
1999	17.6	4.3	1.9	0.4	4.4	2.2	0.1	na	1.8	4.0	1.2	0.4
1986	1.9	0.0	3.8	0	6.6	0.9	0.9	na	0.0	2.8	1.9	0.0
Change ...	15.7	4.3	-1.9	0.4	-2.2	1.3	-0.8	na	1.8	1.2	-0.7	0.4
South Korea												
1999	4.5	0.5	1.6	0.1	20.7	0.2	0.1	0.6	na	1.3	0.3	0.1
1986	2.1	0.0	0.5	1	23.8	1.0	0.0	0.0	na	0.5	0.5	0.0
Change ...	2.4	0.5	1.1	-0.9	-3.1	-0.8	0.1	0.6	na	0.8	-0.2	0.1
Taiwan												
1999	8.4	2.1	3.0	0.1	11.2	0.3	0.3	2.3	2.3	na	0.3	0.1
1986	2.8	0.0	0.0	0	17.5	0.0	0.9	1.4	0.5	na	0.0	0.0
Change ...	5.6	2.1	3.0	0.1	-6.2	0.3	-0.7	0.9	1.8	na	0.3	0.1
Thailand												
1999	3.2	1.1	1.8	2.3	21.6	3.4	4.1	1.8	1.6	0.7	na	3.0
1986	1.4	0.0	2.0	0.7	16.9	2.0	3.4	1.4	0.7	0.0	na	0.0
Change ...	1.9	1.1	-0.2	1.6	4.7	1.4	0.8	0.5	0.9	0.7	na	3.0
Vietnam												
1999	2.8	0.0	2.1	4.3	11.3	2.8	2.1	2.1	2.1	0.7	9.2	na
1986	0.0	0.0	0.0	0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	na
Change ...	2.8	0.0	2.1	4.3	11.3	2.8	2.1	2.1	2.1	0.7	9.2	na

See explanatory notes, if any, and SOURCE at end of table.

Appendix table 5-49.
Intraregional scientific collaboration in selected regions: 1986 and 1999
(Percentages)

Latin America											
Country/ economy	Argentina	Brazil	Chile	Colombia	Costa Rica	Cuba	Mexico	Panama	Peru	Uruguay	Venezuela
Argentina											
1999	na	13.1	3.9	2.6	0.1	0.6	4.9	0.1	0.4	3.0	1.5
1986	na	15.8	2.6	0.0	0.0	0.0	1.3	0.0	0.4	0.4	2.1
Change	na	-2.7	1.4	2.6	0.1	0.6	3.6	0.1	0.0	2.6	-0.6
Brazil											
1999	5.9	na	2.2	1.6	0.3	1.2	2.5	0.1	0.4	0.8	0.9
1986	6.2	na	2.5	0.7	0.3	0.0	1.3	0.2	0.2	0.0	0.2
Change	-0.4	na	-0.3	1.0	0.0	1.2	1.2	-0.1	0.2	0.8	0.7
Chile											
1999	6.7	8.5	na	0.8	0.0	0.8	5.5	0.2	0.2	1.7	1.5
1986	2.8	7.0	na	0.9	0.0	0.0	2.8	0.0	0.0	0.0	0.9
Change	3.9	1.5	na	-0.2	0.0	0.8	2.7	0.2	0.2	1.7	0.6
Colombia											
1999	11.3	16.0	2.0	na	0.8	2.3	13.7	0.8	2.0	0.8	1.6
1986	0.0	6.3	3.1	na	1.6	0.0	3.1	0.0	1.6	0.0	1.6
Change	11.3	9.8	-1.2	na	-0.8	2.3	10.5	0.8	0.4	0.8	0.0
Costa Rica											
1999	1.0	8.0	0.0	2.0	na	0.0	4.0	1.0	1.0	0.0	0.0
1986	0.0	6.3	0.0	3.1	na	0.0	3.1	0.0	0.0	0.0	0.0
Change	1.0	1.8	0.0	-1.1	na	0.0	0.9	1.0	1.0	0.0	0.0
Cuba											
1999	3.4	14.2	2.5	2.9	0.0	na	20.1	0.0	0.5	0.5	3.4
1986	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0	0.0	0.0
Change	3.4	14.2	2.5	2.9	0.0	na	20.1	0.0	0.5	0.5	3.4
Mexico											
1999	3.9	4.4	2.5	2.5	0.3	2.9	na	0.0	0.3	0.5	0.8
1986	1.0	2.6	1.9	0.6	0.3	0.0	na	0.0	0.0	0.3	0.6
Change	2.9	1.9	0.6	1.8	0.0	2.9	na	0.0	0.3	0.2	0.1
Panama											
1999	1.6	3.1	1.6	3.1	1.6	0.0	0.0	na	0.0	0.0	1.6
1986	0.0	3.6	0.0	0.0	0.0	0.0	0.0	na	0.0	0.0	0.0
Change	1.6	-0.4	1.6	3.1	1.6	0.0	0.0	na	0.0	0.0	1.6
Peru											
1999	4.8	9.5	1.0	4.8	1.0	1.0	3.8	0.0	na	1.0	1.0
1986	2.0	2.0	0.0	2.0	0.0	0.0	0.0	0.0	na	0.0	2.0
Change	2.7	7.5	1.0	2.7	1.0	1.0	3.8	0.0	na	1.0	-1.1
Uruguay											
1999	19.8	11.6	6.4	1.2	0.0	0.6	4.1	0.0	0.6	na	1.2
1986	9.1	0.0	0.0	0.0	0.0	0.0	9.1	0.0	0.0	na	0.0
Change	10.7	11.6	6.4	1.2	0.0	0.6	-5.0	0.0	0.6	na	1.2
Venezuela											
1999	5.1	6.6	3.0	1.2	0.0	2.1	3.3	0.3	0.3	0.6	na
1986	4.2	0.8	1.7	0.8	0.0	0.0	1.7	0.0	0.8	0.0	na
Change	1.0	5.8	1.4	0.4	0.0	2.1	1.7	0.3	-0.5	0.6	na

na = not applicable

NOTES: Data are share of indicated countries' internationally coauthored papers with other countries in the same region. Internationally coauthored papers are on a whole-count basis, where each coauthor's country is credited with a whole count. Share percentages may exceed 100% in instances of papers with more than two country authors within the region.

SOURCES: Institute for Scientific Information, Science Citation and Social Citation Indexes; CHI Research, Inc., Science Indicators database; and National Science Foundation, Division of Science Resources Statistics (NSF/SRS).